REMARKS

Claims 4, 7, 8, 16, 19, 25 and 28 have been amended. Claims 1-33 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Objections to the Specification:

The specification has been amended to address the Examiner's concerns.

Objections to the Claims:

The Office Action rejected claims 1-33 under 35 U.S.C. § 1.75(a) for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. The claims have been amended to address most of the Examiner's concerns.

In regard to the preamble of the independent claims, Applicant respectfully disagrees with the Examiner's apparent assertion that a system claim or a method claim must state "for what" the system or method is used. There are no rules or regulations which state that a claim must describe the purpose or use of a system or method. A search of the Patent Office database reveals thousands of issued U.S. patents that include claim preambles of only "a system" or "a method" or the like. The system or method is defined by the body of the respective claim.

Also, in regard to claim 18, "given a storage availability risk level" refers to any given storage availability risk level for use in determining a storage demand capacity. The given storage availability risk level of claim 18 for use in determining a storage requirement may or may not be the same as the given storage availability risk level of claim 16 used for determining a storage requirement. The use of "given" makes clear that each claim refers to any specified storage availability risk level. To the extent that

the claims may be interpreted such that the given storage availability risk level may be the same or different between claims 16 and 18, such a meaning is intentional and would not confuse one of ordinary skill in the art. Similar comments apply to the Examiner's other concerns for claims 18, 27 and 30.

Section 112, Second Paragraph, Rejection:

The Examiner rejected claims 1-14 under 35 U.S.C. § 112, second paragraph, as indefinite. The Examiner contends that claim 1 recites both an apparatus and method steps for using the apparatus. The case cited by the Examiner, *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990), refers to a situation in which a claim recites a tool and method steps for using the tool. However, claim 1 clearly recites only an apparatus. Although the claim does recite limitations in regard to the executable functionality of the program instructions, these limitations serve to further define the apparatus. The "collect" and "determine" clauses of claim 1 are functional limitations that define the nature of the program instructions. As stated in MPEP 2173.05(g): "A functional limitation is an attempt to define something by what it does, rather than by what it is …. There is nothing inherently wrong with defining some part of an invention in functional terms." Thus claim 1 is clearly not a "hybrid claim" in the meaning of *Ex parte Lyell*.

Section 101 Rejection:

The Office Action rejected claims 1-14 and 16-33 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

In regard to claims 1-14, the Examiner states that claim 1 is non-statutory as a hybrid claim. However, as shown above in regard to the section 112 rejection, claim 1 is not a hybrid claim. Therefore, the section 101 rejection of claims 1-14 is traversed.

In regard to claims 16-24 the Examiner states that the method claims do not fall into either of the "safe harbors" defined in the Guidelines for Computer-Implemented Inventions. The "safe harbors" focus on "a physical transformation outside the computer", e.g., either "post-computer process activity" or "pre-computer process activity". *See* MPEP 2106.IV.B.2.(b). In particular, the Examiner states that "collecting storage demand data for a storage system" is not pre-computer activity because the data can be user-entered. However, regardless of whether or not the storage demand data is entered by a user, the data is still representative of physical objects or activities external to the computer process, namely storage demand information about a storage system. According to MPEP 2106.IV.B.2.(b)(i), a process is statutory if it "requires the measurement of physical objects or activities to be transformed outside of the computer into computer data." The clause in claim 16 stating "collecting storage demand data for a storage system" inherently requires that some measure of storage demand for a storage system be transformed into data that is then collected. Regardless of whether the data is entered by a user or automatically collected, the data is still a transformation representative of physical objects or activities external to the computer process, namely storage demand information about a storage system. MPEP 2106 discusses a similar case in which a computer process that operates on data representative of human cardiac activity was found statutory. See *Arrhythmia Research Tech. v. Corazonix Corp.*, 958 F.2d 1053, 22 USPQ2d 1033 (Fed. Cir. 1992). Just like the data in *Arrhythmia* was a transformation of human cardiac activity, the data in Applicant's claim 16 is a transformation of storage demand for a storage system. Therefore, claim 16 recites a statutory computer-implemented process that operates on data representative of an external activity (demand in regard to a storage system).

Furthermore, Applicant notes that the Examiner has failed to consider other categories of statutory computer-implemented processes. The "safe harbors" is only one category by which computer-implemented process claims may be statutory. In addition to the "safe harbors", MPEP 2106.IV.B.2.(b) also states that a process is statutory if it is "limited to a practical application in the technological arts" regardless of whether or not there is any pre- or post- process activity. The most famous example of this category is

found in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998) as discussed in MPEP 2106 where the court stated that the relevant claim was statutory because "the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application ... because it produces 'a useful, concrete and tangible result' – a final share price". Just like transforming data representing discrete dollar amounts to determine a final share price was considered a practical application and thus statutory in *State Street*, the transformation of storage demand data to determine a storage requirement recited in claim 16 is a practical application and thus statutory. MPEP 2106.II.A states: "Office personnel have the burden to establish a *prima facie* case that the claimed invention as a whole is directed to <u>solely</u> an abstract idea or to manipulation of abstract ideas or does not produce a useful result. <u>Only</u> when the claim is <u>devoid of any</u> limitation to a practical application in the technological arts should it be rejection under 35 U.S.C. 101." (emphasis added). As discussed above, claim 16 clearly recites a practical application in the technological arts. Therefore, the rejection is improper.

In regard to claims 25-33, claim 25 has been amended to address the Examiner's concern.

Section 102(e) Rejection:

The Office Action rejected claims 1-3, 7, 9, 13-18, 22, 24-27, 31 and 33 under 35 U.S.C. § 102(e) as being anticipated by Talluri (U.S. Publication 2004/0153481). Applicant respectfully traverses this rejection for at least the following reasons.

In regard to claim 1, Talluri does not teach a processor and a memory comprising program instructions, wherein the program instructions are executable by the processor to <u>collect storage demand data for a storage system</u>. Instead, Talluri teaches a system in which storage on each storage server node (SN) is segmented into nodal storage (NS) and global storage (GS). *See* paras. [0058] - [0059] and Fig. 5. Talluri teaches that each

storage server node stores data to its local nodal storage as long as its local nodal storage has sufficient capacity. If the local nodal storage lacks sufficient capacity, the storage server node writes the data to the node manager (NM) which then writes the data to selected global storage. *See* paras. [0069] - [0070], [0087] - [0088] and Fig. 6. The only data used by Talluri's system in determining whether to write to nodal storage or to global storage is the current capacity of a node's local nodal storage. *See, e.g.*, element 604 of Fig. 6 and first sentence of para. [0088]. Talluri's system does not collect or use any data pertaining to demand for a storage system. Storage demand and storage capacity utilization are completely different metrics. Talluri explicitly teaches that storage usage decisions in his system are based solely on current utilization of capacity. Talluri's system is similar to the type of systems discussed in the Related Art section of the present application that only make use of current utilization of capacity. Talluri's system does not collect any demand data for its storage system.

Further in regard to claim 1, Talluri does not teach a processor and a memory comprising program instructions, wherein the program instructions are executable by the processor to determine a storage requirement for the storage system to meet a given storage availability risk level under one or more conditions indicated by the storage demand data. The portions of Talluri cited by the Examiner mention nothing about determining a storage requirement for a storage system. Instead, as discussed above, Talluri teaches a system in which storage is segmented into nodal and global storage on each storage server node, and if local nodal storage lacks sufficient capacity, the storage server node writes the data to the node manager (NM) which then writes the data to selected global storage. Talluri's system clearly has nothing to do with determining a storage requirement for a storage system. Moreover, there is clearly no concept of a storage availability risk level in Talluri, let alone determining a storage requirement for a storage system to meet a given storage availability risk level. The only metric used by Talluri's system in determining whether to write to nodal storage or to global storage is the current capacity of the relevant node's local nodal storage which is clearly not a risk level. *See, e.g.*, element 604 of Fig. 6 and first sentence of para. [0088]. Furthermore, Talluri's system does not take into account any conditions indicated by collected storage

demand data, let alone for use in determining a storage requirement for a storage system. As discussed above, the only metric used by Talluri's system is the current availability of local nodal storage – and Talluri uses that information to determine whether or not to use nodal or global storage, not to determine a storage requirement for a storage system.

Applicant reminds the Examiner that anticipation requires the presence in a single prior art reference disclosure of <u>each and every element</u> of the claimed invention, <u>arranged as in the claim</u>. M.P.E.P 2131; *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). The <u>identical</u> invention must be shown in as complete detail as is contained in the claims. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Talluri clearly does not describe the identical invention as recited in Applicant's claim 1.

Similar arguments apply in regard to the other independent claims.

Applicant also asserts that the rejection of numerous ones of the dependent claims is further unsupported by the teachings of the cited art. However, since the rejection of the independent claims has been shown to be improper, a further discussion of the rejection of the dependent claims is not necessary at this time.

Section 103(a) Rejection:

The Office Action rejected claims 8, 21 and 30 under 35 U.S.C. § 103(a) as being unpatentable over Talluri in view of Jacobus et al. (U.S. Publication 2004/0068455) (hereinafter "Jacobus"). Applicant traverses this rejection for at least the reasons given above in regard to the independent claims.

Furthermore, neither Talluri nor Jacobus has anything to do with acquiring new storage for a storage system in regard to a storage requirement for the storage system to meet a given storage availability risk level under one or more conditions indicated by the storage demand data given a lead time to acquire the new storage. The only mention in

Talluri of adding new storage is at paras. [0093] - [0096]. However, Talluri only discusses how the additional storage is configured in the system. Talluri's teachings have absolutely nothing to do with how the additional storage is acquired. Thus, there would be no reason for anyone of ordinary skill in the art to apply any concept of lead time from Jacobus to the teachings of Talluri. Moreover, Jacobus pertains to inventory management for manufacturing enterprises (see, e.g., para. [0002]) and has absolutely nothing to do with acquiring new storage for a network storage system such as in Talluri.

CONCLUSION

Applicant submits the application is in condition for allowance, and notice to that effect is respectfully requested.

If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above referenced application from becoming abandoned, Applicant hereby petitions for such extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5760-13600/RCK.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☐ Petition for Extension of Time

☐ Notice of Change of Address

☐ Fee Authorization Form authorizing a deposit account debit in the amount of $ for fees (   ).

☐ Other:

Respectfully submitted,

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